Notice of Allowability	Application No.	Applicant(s)	
	10/023,011	SIX, LAURENT A.	
	Examiner	Art Unit	
	John J. Tabone, Jr.	2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Amendment filedof 01/31/2005*.

2. ☒ The allowed claim(s) is/are *21*.

3. ☒ The drawings filed on *31 December 2001* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

ALBERT DECADY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

DETAILED ACTION

1. Newly added claim 21 has been examined. Claims 1-20 have been canceled.

Response to Arguments

2. Applicant's arguments, see Applicant Remarks, filed 01/31/2005, with respect to claims 1-20 and newly added claim 21 have been fully considered and are persuasive. The Examiner favors the allowance of claim 21.

Allowable Subject Matter

3. Claim 21 is allowed.

The following is an Examiner's Statement of Reason for Allowance.

The present invention relates to a method for providing context save and restore using a test scan chain in an integrated circuit device also having a memory and a state machine.

The claimed invention as set forth in claim 21 recites features such as: providing a scan chain of digital logic components comprised of a plurality of sub-chains; in a test mode, providing an input test data set to the scan chain, and scanning the input test data set through the scan chain, and providing an output test data set as an output of the scan chain; in a first switch mode, linking the sub-chains in parallel with each other and to a device memory, and reading a first functional data set from the memory; in a functional mode, linking the digital logic components with other logic circuitry in

accordance with an application to be executed by the state machine, and executing the application to generate second functional data; and in a second switch mode, linking the sub-chains in parallel with each other and to the memory; storing the second functional data set in the memory.

The prior art of record teaches providing a scan chain (Fig. 6, 610) of digital logic components comprised of a plurality of sub-chains (Fig. 7, 704); providing an input test data set to the scan chain (Fig. 6, 606), and scanning the input test data set through the scan chain, and providing an output test data set as an output of the scan chain (Fig. 6, 608); linking the sub-chains in parallel with each other (Fig. 7, 704, ¶ 43); linking the digital logic components with other logic circuitry in accordance with an application to be executed by the state machine, and executing the application to generate second functional data (Page 4, ¶ 41-42); Kurtulik et al. (U52002/0125907) is an example of such prior art. The prior arts of record, however, fail to teach, singly or in combination, **in a first switch mode**, linking the sub-chains in parallel with each other **and to a device memory**, and reading a first functional data set from the memory as recited in claim 21. The prior arts of record also fail to teach, singly or in combination, **in a second switch mode**, linking the sub-chains in parallel with each other **and to the memory**; storing the second functional data set in the memory as recited in claim 21. As such, modification of the prior art of record to include the claimed **first switch mode** and **second switch mode**, as described above, can only be motivated by hindsight reasoning, or by changing the intended use and function of the prior art themselves. Therefore, it is not clear that one of ordinary skill in the art at the time of the invention

would have made the necessary modifications to the prior art of record to encompass the **first switch mode** and **second switch mode** set forth in the present application. Moreover, none of the prior arts of record, taken either alone or in combination, anticipate nor render obvious the **first switch mode** and **second switch mode** as described above.

The Examiner agrees with the Applicant's arguments with regard to these features in view of the arts of record; therefore, the Examiner favors the allowance of claim 21. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Tabone, Jr. whose telephone number is (571) 272-3827. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John J. Tabone, Jr. 6/9/05
Examiner
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